



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,723	09/29/2006	Yasumaro Toshima	TOSH3002/GAL	9401
23364 7590 02/15/2008 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314				
EXAMINER				
NGUYEN, THONG Q				
ART UNIT		PAPER NUMBER		
2872				
MAIL DATE		DELIVERY MODE		
02/15/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/594,723

Applicant(s)

TOSHIMA ET AL.

Examiner

Thong Nguyen

Art Unit

2872

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/5506)
- Paper No(s)/Mail Date 9/29/06
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The present Office action is made in response to the amendment filed on 12/18/07. It is noted that in the amendment, applicant has amended claims 3, 6 and 7 and added a new set of claims, i.e., claims 8-20, into the application. There is not any claim being canceled.
2. A review of the newly-added claims has resulted that the device of the newly-added claims further limit the subject matter recited in their base claim(s), thus all pending claims 1-20 are examined in this Office action.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

4. The listing of references in the specification in page 2 is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

5. The drawings contained three sheets of figures 1-5 were received on 9/29/2006. These drawings are approved by the examiner.

Specification

6. The abstract of the disclosure is objected to because of the following reasons: First, the abstract contains more than one paragraph, and Second, the abstract contains more than 150 words. Correction is required. See MPEP § 608.01(b).
7. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

8. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

9. The disclosure is objected to because of the following informalities: The specification is objected to because it does not have sufficient headlines to provide a clear framework of the specification. It is also noted that the specification does not have a Summary of the Invention and a Brief description of the Drawings, ... Appropriate correction is required.

Claim Objections

10. Claims 3 and 8 are objected to because of the following informalities.
Appropriate correction is required.

In each of claim 3, line 4 and claim 8, line 3, the terms "each have" should be changed to --each has--.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1, 3-7, 13, 15 and 17-18, as best as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Toshima et al (Pub. No. 2003/0174518) in view of Uchida et al (Pub. No. 2003/0179456).

Toshima et al disclose a surface light source device. The surface light source device as described in paragraph [0061] and shown in fig. 5 comprises the following features: a) a light source (8) having a reflector (81) surrounding the light source on its back side; a light guide (5) having a light entrance surface 952)

facing the light source and having a light emitting surface (51); a downward-facing prism sheet (6) having a prism surface facing the emitting surface of the light guide and a smooth surface opposite the downward-face prism surface; and a light diffusing element (1). Regarding to the light diffusing element, in paragraphs [0030] and [0057]-0060] and shown in fig. 3, Toshima et al disclose that the light diffusing element has a light diffusing surface and a roughed surface facing the smooth surface of the prism sheet. Regarding to the materials of the light diffusing element, in paragraphs [0034]-[0037], Toshima et al disclose that the material of the light diffusing element is made by polymer materials. The only feature missing from the light diffusing element as provided by Toshima et al is that they do not explicitly disclose that the smooth surface of the prism sheet comprises a comb polymer has a stem moiety and a branch moiety wherein the main component constituting the stem moiety is different from that constituting the branch moiety.

However, the use of a comb polymer having a stem moiety and a branch moiety wherein the main component constituting the stem moiety is different from that constituting the branch moiety for making an optical element so that its surface has an excellent surface smoothness is known to one skilled in the art as can be seen in the light diffusing element provided by Uchida et al. In particular, Uchida et al disclose a light diffusing element and teach the use of polymer materials selected from a combination of polymers which includes acrylic material and styrene material. See Uchida et al, paragraphs [0024]-[0032] and [0035]. Thus, it

would have been obvious to one skilled in the art at the time the invention was made to modify the light diffusing element and/or the prism sheet of the surface light source device as provided by Toshima et al by using a combination of polymer materials as suggested by Uchida et al for the purpose of increasing the smoothness of the flat/smooth surface of the diffusing element or the prism sheet.

13. Claims 2, 8-12, 14, 16 and 19-20, as best as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Toshima et al (Pub. No. 2003/0174518) in view of Uchida et al (Pub. No. 2003/0179456).

Toshima et al disclose a surface light source device. The surface light source device as described in paragraph [0061] and shown in fig. 5 comprises the following features: a) a light source (8) having a reflector (81) surrounding the light source on its back side; a light guide (5) having a light entrance surface 952) facing the light source and having an light emitting surface (51); a downward-facing prism sheet (6) having a prism surface facing the emitting surface of the light guide and a smooth surface opposite the downward-face prism surface; and a light diffusing element (1). Regarding to the light diffusing element, in paragraphs [0030] and [0057]-0060] and shown in fig. 3, Toshima et al disclose that the light diffusing element has a light diffusing surface and a roughed surface facing the smooth surface of the prism sheet. Regarding to the materials of the light diffusing element, in paragraphs [0034]-[0037], Toshima et al disclose that the material of the light diffusing element is made by polymer materials.

There are two things missing from the light diffusing element as provided by Toshima et al as follow: First, they do not explicitly disclose that the smooth surface of the prism sheet comprises a comb polymer has a stem moiety and a branch moiety wherein the main component constituting the stem moiety is different from that constituting the branch moiety; and Second, they do not disclose that the diffusing element has a smooth surface and the prism sheet has a roughed surface as claimed.

However, the use of a comb polymer having a stem moiety and a branch moiety wherein the main component constituting the stem moiety is different from that constituting the branch moiety for making an optical element so that its surface has an excellent surface smoothness is known to one skilled in the art as can be seen in the light diffusing element provided by Uchida et al. In particular, Uchida et al disclose a light diffusing element and teach the use of polymer materials selected from a combination of polymers which includes acrylic material and styrene material. See Uchida et al, paragraphs [0024]-[0032] and [0035]. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the light diffusing element and/or the prism sheet of the surface light source device as provided by Toshima et al by using a combination of polymer materials as suggested by Uchida et al for the purpose of increasing the smoothness of the flat/smooth surface of the diffusing element or the prism sheet.

Regarding to the second feature missing from the device provided by Toshima et al, it is noted that such a structure of the light diffusing element and the prism sheet as claimed is merely that of a preferred embodiment and no criticality has been disclosed. The support for that conclusion is found in the present specification in which applicant has clearly disclosed that the prism sheet has a smooth surface and the light diffusing element has a roughed surface. It is also noted that the non-criticality of the arrangement of the smooth surface or the roughed surface on either the light diffusing element or the prism sheet is indeed claimed as can be seen in the present claim 1. It is also noted that it was decided in the Courts that an interchange in positions between two components/elements is within the level of one skilled in the art. Thus, absent any showing of criticality,, it would have been obvious to one skilled in the art at the time the invention was made to modify the combined product as provided by Toshima et al and Uchida et al by rearranging the roughed surface on the prism sheet and the smooth surface on the light diffusing element for the purpose of satisfying a particular application.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

Art Unit: 2872

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thong Nguyen/

Primary Examiner, Art Unit 2872